

REMARKS

Claims 1-16 are pending. Claims 13-16 have been withdrawn from consideration. By this Amendment, claims 1 and 11 are amended. No new matter is added. In view of the above amendments and following remarks, reconsideration and allowance are respectfully requested.

The attached Appendix includes a marked-up copy of the rewritten claims (37 C.F.R. §1.121(c)(1)(ii)).

Restriction Requirement

Applicants affirm their election of Group I, claims 1-12, with traverse.

Claim 13 is a process claim that contains all of the limitations of the product claim 1. MPEP § 821.04 states that "if applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims which depend from or otherwise include all the limitations of the allowable product claim will be rejoined." Accordingly, Applicants respectfully request rejoinder of claims 13-16 upon allowance of claim 1.

Claim Objections

The Office Action objects to claim 12. Applicants submit that the amendment to claim 11 overcomes the objection. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

Rejection Under 35 U.S.C. §112, Second Paragraph

The Office Action rejects claims 1-12 under 35 U.S.C. §112, second paragraph. Claims 1 and 11 have been amended. Applicants submit that the above amendments overcome the rejection. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under 35 U.S.C. §103(a)

The Office Action rejects claims 1-12 under 35 U.S.C. §103(a) over U.S. Patent No. 6,174,607 to Sugita et al. ("Sugita") in view of U.S. Patent No. 5,279,884 to Kitamura et al. ("Kitamura"). Applicants respectfully traverse the rejection.

Claim 1 recites "a thermal transfer recording medium comprising: a substrate in the form of a film, a solvent-resistant layer formed on said substrate by applying a composition comprising a dispersion of polyethylene wax in a solvent and a solution of polyester resin in a solvent, and an ink layer formed by coating on said solvent-resistant layer, the ink layer comprising a ketone resin" (emphasis added). Sugita in view of Kitamura does not teach or suggest the instant thermal transfer recording medium.

Sugita is directed to a thermal transfer recording medium comprising a substrate, a release layer and an ink layer. See Sugita at Abstract. Kitamura is cited for its teaching of an ink layer comprising ketone. However, neither Sugita nor Kitamura, teach the solvent-resistant layer as claimed. The claimed solvent-resistant layer is formed by applying a composition comprising a dispersion of polyethylene wax in a solvent and a solution of polyester resin in a solvent. Nowhere does Sugita in view of Kitamura teach or suggest a solvent-resistant layer formed as in the claimed invention.

The Office Action admits that Sugita does not teach a release layer comprising a combination of polyethylene wax and polyester resin. However, the Office Action asserts that it would have been obvious to combine both polyethylene wax and polyester resin so as to have a layer having the same effect. However, nowhere do Sugita or Kitamura teach or suggest a solvent-resistant including a dispersion of polyethylene wax in a solvent and a solution of polyester resin in a solvent.

MPEP 2143.01 states that obviousness can only be established by modifying or combining the teachings of the prior art when there is some teaching, suggestion or

motivation to do so found in the prior art or in the knowledge generally available to one skilled in the art. As admitted in the Office Action, the cited references do not teach or suggest the claimed solvent-resistant layer comprising a combination of polyethylene wax and polyester resin. Further, the Office Action does not demonstrate that creating such a combination would have been obvious to a skilled artisan.

Sugita discloses a list of multiple components that may be used in a release layer. See Sugita at col. 3, ll. 52-58. However, Sugita fails to teach that these different components are equivalent in any way, and particularly in their function in the release layer. Further, Sugita does not provide any guidance by which a skilled artisan could select the two components of the claimed invention from among the list of the different possible components in Sugita. As the components taught by Sugita have not been demonstrated to be equivalent, and there is no teaching or suggestion in Sugita that polyethylene wax and polyester resin could or should be combined as in the claimed invention, a *prima facie* of obviousness case has not been made.

In Table 1 at page 15 of the instant specification, thermal transfer recording media including the claimed solvent-resistant layers (Examples 1-8) are compared to thermal transfer recording media comprising release layers, such as those taught by Sugita (Comparative Examples 1-4). The solvent-resistant layer of each of Examples 1-8 includes a combination of polyethylene wax and polyester resin. Each of Comparative Examples 1-4 includes a layer including only a polyester resin. In comparing the coating properties of Examples 1-8 with the coating properties of Comparative Examples 1-4, it is evident that the claimed invention provides a result that is significantly better than the result achieved using thermal transfer recording media comprising release layers such as those taught by Sugita. In each of Examples 1-8, coating properties are good over the entire length of the thermal transfer recording medium. By contrast, in each of Comparative Examples 1-4, the unevenness of the coating was too severe to prepare a thermal transfer medium.

The above-described experimental results demonstrate that it would not have been obvious to combine two poor performing components separately taught by Sugita to obtain a superior performing combination, as in the claimed invention. That is, Sugita provides no suggestion that the excellent results achieved in the Examples according to the claimed invention, could be achieved by combining the "equivalent" components that individually provide poor results. Moreover, Sugita does not suggest that the specific claimed components, which one reading Sugita would expect to provide only bad effects if the components are assumed to be equivalent, should be combined to produce good results. Accordingly, even assuming that the components taught by Sugita are equivalent, which Applicants do not admit, a *prima facie* case of obviousness still has not been made.

Additionally, the instant specification illustrates that the claimed invention provides unexpected, superior results in comparison with the cited art. Particularly, the Examples and Comparative Examples of the instant specification demonstrate that release layers according to Sugita that do not comprise a combination of polyethylene wax and polyester resin have vastly inferior properties as compared to the solvent-resistant layer of claim 1. For at least these reasons, the unexpected, superior results achieved by the claimed invention rebut any alleged *prima facie* case of obviousness.

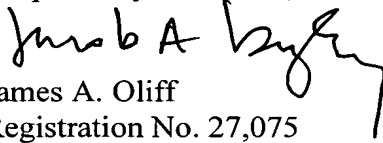
Thus, claim 1 would not have been rendered obvious by the combination of Sugita and Kitamura. Claims 2-12 depend from claim 1 and so, accordingly, also would not have been rendered obvious by the cited references. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-12 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,


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Date: September 12, 2001

Attachment:
Appendix

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APPENDIX

Changes to Claims:

Claim 11 is canceled.

The following is a marked-up version of the amended claim:

1. (Amended) A thermal transfer recording medium comprising:
_____ a substrate in the form of a film;
_____ a solvent-resistant layer formed on said substrate ~~and mainly containing a~~
~~polyester resin and a polyethylene wax~~ by applying a composition comprising a dispersion of
polyethylene wax in a solvent and a solution of polyester resin in a solvent; and
_____ an ink layer formed by coating on said solvent-resistant layer ~~and based on, the~~
ink layer comprising a ketone resin.

11. (Amended) A thermal transfer recording medium according to Claim 4,
wherein a ~~heat-resistant lubricant layer is formed on the side of the substrate opposite to the~~
~~side on which the ink layer is formed~~ release layer is formed between said substrate and said
solvent-resistant layer.